CLAIM AMENDMENTS

1. (cancelled)

2. (currently amended) A multi-mode scanning imaging system for imaging an object, comprising:

a plurality of discrete two-dimensional microscope arrays for scanning along a single linear motion ~~direction~~ of scan, each microscope array being configured to image the object with a plurality of optical elements arranged in rows, said rows being staggered with respect to said motion of scan such that each of the optical elements images a respective continuous strip of the object along the motion of scan, said continuous strip being substantially free of overlap with continuous strips imaged by all other optical elements of said plurality of optical elements;

a scanning mechanism for producing said scan as a result of a relative movement between the microscope arrays and the object along said single linear motion ~~direction~~ of scan;

image sensors corresponding to the microscope arrays for capturing image data representative of ~~the~~ respective images of the object imaged thereby; and

a mode implementation system for combining the image data captured by said image sensors during ~~a~~ said scan of the scanning mechanism;

wherein said ~~direction of~~ scan is implemented ~~along a single~~

~~dimension~~ through said single linear motion of scan across the object; said microscope arrays are configured to operate according to different modes of operation of the imaging system and produce correspondingly different images of the object during said scan of the scanning mechanism; and said microscope arrays sequentially scan and image a same area of the object during said scan of the scanning mechanism.

3. (previously presented) The imaging system of claim 2, wherein said image data corresponding to said microscope arrays are registered with one another by said mode implementation system.

4. (previously presented) The imaging system of claim 3, wherein said image data corresponding to said microscope arrays represent respectively different colors.

5. (currently amended) The imaging system of claim 3, wherein said image data corresponding to said microscope arrays represent respectively different object ~~surfaces~~ planes.

6. (currently amended) The imaging system of claim 2, further comprising an illumination system, wherein said ~~different~~ microscope arrays operate in at least two different modes of microscopy during said scan of the scanning mechanism.

7. (original) The imaging system of claim 6, wherein said different modes are selected from the group trans-illumination microscopy, epi-illumination microscopy, fluorescence microscopy, and two-photon microscopy.

8. (cancelled)

9. (cancelled)

10. (cancelled)

11. (cancelled)

12. (cancelled)

13. (cancelled)

14. (cancelled)

15. (cancelled)

16. (cancelled)

17. (previously presented) The imaging system of claim 2,

wherein said scanning mechanism comprises a tray and said microscope arrays comprise discrete modules removably supported by said tray.

18. (cancelled)

19. (currently amended) A method for imaging an object with a multi-mode imaging system, comprising the following steps:

providing a plurality of discrete two-dimensional microscope arrays for scanning the object along a single linear motion ~~direction~~ of scan, each microscope array being configured to image the object with a plurality of optical elements arranged in rows, said rows being staggered with respect to said motion of scan such that each of the optical elements images a respective continuous strip of the object along the motion of scan, said continuous strip being substantially free of overlap with continuous strips imaged by all other optical elements of said plurality of optical elements;

producing said scan as a result of a relative movement between the microscope arrays and the object such that each of the microscope arrays is scanning and imaging a same area of the object sequentially during a single scanning operation ~~along~~ through said linear motion of scan across the object ~~a single dimension in said direction of scan~~;

capturing image data representative of respective images of the object while said microscope arrays are configured to operate

according to different modes of operation of the imaging system and to produce correspondingly different images of the object during the scan; and

combining the image data captured according to said different modes of operation of the imaging system.

20. (previously presented) The method of claim 19, further comprising registering said image data corresponding to said microscope arrays with one another according to said different modes of operation of the imaging system.

21. (previously presented) The method of claim 20, wherein said image data corresponding to said microscope arrays represent respectively different colors.

22. (currently amended) The method of claim 20, wherein said image data corresponding to said microscope arrays represent respectively different object ~~surfaces~~ planes.

23. (previously presented) The method of claim 19, further comprising providing an illumination system, wherein different microscope arrays operate in at least two different modes of microscopy during said relative movement between the microscope arrays and the object.

24. (original) The method of claim 23, wherein said different modes are selected from the group trans-illumination microscopy, epi-illumination microscopy, fluorescence microscopy, and two-photon microscopy.

25. (cancelled)

26. (cancelled)

27. (cancelled)

28. (cancelled)

29. (cancelled)

30. (cancelled)

31. (cancelled)

32. (cancelled)

33. (cancelled)

34. (currently amended) The method of claim 19, further comprising providing a tray and removably supporting said

microscope arrays as discrete modules by said tray.